

Amendments to the Claims:

1. (Previously Presented) An intravascular stent comprising:
a mesh of electrically conductive material; and
a non-conductive material disposed within the mesh for connecting the
mesh in a generally tubular arrangement such that a net current flowing through the
5 mesh is substantially canceled.
2. (Previously Presented) An intravascular stent as set forth in claim 1
wherein the mesh of electrically conductive material comprises a plurality of struts
disposed in generally diagonal directions with respect to a central axis of the stent.
3. (Previously Presented) An intravascular stent as set forth in claim 2
wherein the non-conductive material comprises a plurality of connector elements for
channeling a current through the plurality of struts.
4. (Previously Presented) An intravascular stent as set forth in claim 3
wherein the current flowing through the struts is induced by RF signals within an
examination region of a magnetic resonance apparatus.
5. (Previously Presented) An intravascular stent as set forth in claim 4
wherein the struts and connector elements define a plurality of strut segments, each
strut segment having a segment current associated therewith and the segment currents
in adjacent strut segments are equal in magnitude and opposite in polarity.
6. (Previously Presented) An intravascular stent as set forth in claim 1
wherein the conductive mesh comprises a plurality of co-axial loops and a plurality of
linking members for connecting the co-axial loops.
7. (Previously Presented) An intravascular stent as set forth in claim 6
wherein the non-conductive material comprises a plurality of insulating nodes, the

insulating nodes disposed within the conductive mesh whereby a plurality of open circuits are formed in the mesh.

8. (Previously Presented) An intravascular stent as set forth in claim 6 wherein the non-conductive material comprises a plurality of insulating nodes, the insulating nodes disposed within the conductive mesh, and the axial loops and linking members connected within the insulating nodes whereby an induced current is
5 channeled through the conductive mesh such that the net current in the stent is substantially minimized.

9. (Previously Presented) A magnetic resonance compatible stent for use in intravascular therapy, the stent comprising:

a plurality of electrically conductive elements arranged in a generally tubular structure; and

5 at least one non-conductive insulator disposed among the conductive elements for directing a current flowing in the conductive elements such that a net current flowing in the stent is substantially minimized.

10. (Previously Presented) A magnetic resonance compatible stent as set forth in claim 9 wherein the current is induced by RF signals in an examination region of a magnetic resonance apparatus.

11. (Previously Presented) A magnetic resonance compatible stent as set forth in claim 10 wherein the conductive elements comprise generally diagonally arranged struts with respect to a central axis of the stent and the at least one non-conductive insulator comprises a plurality of connector elements for directing
5 the current through the struts whereby adjacent segment currents cancel each other.

12. (Previously Presented) A magnetic resonance compatible stent as set forth in claim 10 wherein:

the conductive elements comprise:

5 a plurality of loops disposed about a central axis of the
stent; and
a plurality of linking members for joining the loops
such that the loops and linking members form a generally tubular
structure around the central axis of the stent; and
the at least one non-conductive insulator comprises a plurality of
10 insulating nodes disposed within the conductive elements to control the current
induced in the conductive elements.

13. (Previously Presented) A magnetic resonance compatible
stent as set forth in claim 12 wherein the loops and linking members are connected
within the insulator nodes whereby currents flowing through adjacent loops
substantially cancel each other.

14. (Previously Presented) A magnetic resonance compatible
stent comprising:
conducting means for conducting a current in the stent, the current
being induced by RF signals from within an examination region of a magnetic
5 resonance apparatus; and
non-conducting means for directing the current flowing in the stent
such that a net current flowing in the stent is minimized.

15. (Currently Amended) A method of magnetic resonance imaging
comprising the steps of:
generating a main magnetic field within an examination region;
exciting magnetic resonance in a subject disposed in the examination
5 region by transmitting RF signals into the examination region, the subject having
disposed therein an intravascular stent-disposed therein comprising a generally tubular
conductive mesh, the mesh being arranged such that currents induced in the mesh
during a magnetic resonance examination are substantially cancelled by one another;
spatially encoding the magnetic resonance in the subject via magnetic
10 field gradients;

- receiving magnetic resonance signals from the subject;
inducing a current in the intravascular stent from at least one of the
transmitted RF signals and the magnetic resonance signals from the subject, the
induced currents substantially cancelling one another; and
15 ~~directing the induced current through the stent whereby a net current~~
~~flowing through the stent is minimized; and~~
reconstructing the received signals into a magnetic resonance image.

16. (Previously Presented) A stent comprising a generally tubular
conductive mesh, the mesh being arranged such that currents induced in the mesh
during a magnetic resonance examination are substantially cancelled by one another.

17. (New) The method of magnetic resonance imaging comprising
performing magnetic resonance imaging on a region of a patient in which the stent **as**
claimed in claim 1 has been implanted.

18. (New) An MR guided surgical method comprising:
imaging an implantation region of a patient with a magnetic resonance
imaging system;
inserting the stent **as claimed in claim 1** in a compressed state into the
5 implantation region;
alternately adjusting a position of the stent and repeating the magnetic
resonance step until the stent is located in a target location;
expanding the stent.